<u>In the Specification:</u>

Please amend the Title of the applications as follows:

<u>Attenuated Phase-Shifting Masks And Methods</u> ~~Method~~ Of Making [[An]] Attenuated Phase-Shifting ~~Mask~~ <u>Masks</u> From [[A]] Mask ~~Blank~~ <u>Blanks</u>

Please amend paragraph [0009] as follows:

In accordance with another aspect of the present invention, <u>a</u> method of making a patterned attenuated phase-shifting mask from a mask blank is provided. The mask blank includes an attenuation and phase-shifting layer with a first default thickness and a transparent layer with a second default thickness. The attenuation and phase-shifting layer covers the transparent layer. In this method, a circuit design pattern is formed. The formation of the circuit design pattern includes forming a plurality of clear areas and forming a plurality of dark areas. The formation of dark areas includes reducing a thickness of the attenuation and phase-shifting layer from the first default thickness to a first adjusted thickness. The formation of clear areas includes removing portions of the attenuation and phase-shifting layer at clear areas, and reducing a thickness of the transparent layer at the clear areas from the second default thickness to a second adjusted thickness.

Please amend paragraph [0010] as follows:

The attenuated phase-shifting mask may be designed for light with a target wavelength. The first adjusted thickness and the second adjusted thickness may be designed so that the phase of light passing through dark areas differs from the phase of light passing through clear areas by a predetermined phase shift. The predetermined phase shift may be about 180 degrees, for example. The first thickness ~~also, or in alternative,~~ may <u>alternatively</u> be designed so that light passing through dark areas has a predetermined optical transmission. The predetermined optical transmission may be between about 5% and about 15%, for example. Also, the predetermined optical transmission may be between about 2% and about 20%. The thickness of the attenuation and phase-shifting layer may be reduced by etching (e.g., reactive ion etching), for example. Also, the portions of the attenuation and phase-shifting layer may be removed by etching. Furthermore, the thickness of the transparent layer may be reduced at the clear areas by etching.

Please amend paragraph [0013] as follows:

FIG. 2 is a side cross-section view for a portion of a conventional ~~attenuate~~ <u>attenuated</u> phase-shifting mask formed from the mask blank of FIG. 1;

Please amend paragraph [0016] as follows:

Referring now to the drawings, wherein like reference numbers are used herein to designate like elements throughout the various views<u>, and</u> illustrative embodiments of the present invention are shown and described. The figures are not necessarily drawn to scale, and in some instances the drawings have been exaggerated and/or simplified in places for illustrative purposes only. One of ordinary skill in the art will appreciate the many possible applications and variations of the present invention based on the following illustrative embodiments of the present invention.

Please amend paragraph [0028] as follows:

Next, as shown in FIG. 6, portions of the attPS layer 24 are removed in a pattern to form the clear areas 26. In the second embodiment, part of the attPS layer 24 having a thickness [[D_2]] $\underline{D_3}$ remains over the transparent layer 22 at the clear areas 26 (see FIG. 6). Preferably, the removal of attPS layer material at the clear areas 26 is performed using a RIE process with an etch chemistry of SF_6 and/or CF_4, for example. However, one of ordinary skill in the art should realize other processes that may be use for such removal, including (but not necessarily limited to) wet etching, RIE, ion milling, or any combination thereof, for example. The following equations may be used to calculate the phase shift and transmittance, and/or to determine the values of D_1 and [[D_2]] $\underline{D_3}$ that provide desired values of phase shift and transmittance, for a given wavelength (λ_t) of light:

$$\cancel{\Phi_t = [2(n_t-1)(D_1-D_2)/\lambda_t]180°}\ \ \underline{\Phi_t = [2(n_t-1)(D_1-D_3)/\lambda_t]180°}$$

$$T_1 = L_1/L_o = A_t \exp(-4\pi k_t D_1 / \lambda_t)$$

$$T_2 = L_2/L_o = \cancel{A_t \exp(-4\pi k_t D_2 / \lambda_t)}\ \ \underline{A_t \exp(-4\pi k_t D_3 / \lambda_t)}$$

$$T_t = L_1/L_2 = T_1/T_2 = \cancel{\exp[-4\pi k_t (D_1-D_2)/\lambda_t]}\ \ \underline{\exp[-4\pi k_t (D_1-D_3)/\lambda_t]}$$

where:

Φ_t = phase shift of light through line-A relative to light through line-B, based on using D_1 for dark area, [[D_2]] $\underline{D_3}$ for clear area, and λ_t, where $\lambda_t < \lambda_o$

n_t = refractive index of attPS layer material at λ_t

D_1 = attPS layer thickness on mask blank at dark area

[[D_2]] $\underline{D_3}$ = attPS layer thickness on mask blank at clear area

λ_t = wavelength of light used

T_t = transmittance through line-A relative to light through line-B based on using D_1, [[D_2]] $\underline{D_3}$, and λ_t

T_1 = transmittance through line-A based on using D_1 and λ_t

T_2 = transmittance through line-B based on using [[D_2]] $\underline{D_3}$ and λ_t

A_t = constant for attPS layer material at λ_t

k_t = extinction coefficient for attPS layer material at λ_t.

Please amend paragraph [0029] as follows:

Thus, the values of D_1 and [[D_2]] $\underline{D_3}$ (see FIG. 6) may be adjusted and tuned to provide optimum values for phase shift and transmittance through the dark areas 28 (line-A in FIG. 6) relative to the clear areas 26 (line-B in FIG. 6). For example, if the mask blank 20 is designed to provide a phase shift of about 180 degrees with a dark area transmittance of about 6% at λ_o, it may be possible to obtain a phase shift of about 180 degrees or more and a dark area transmittance of about 6% or less using λ_t and the same mask blank via the method and structure of the second embodiment (e.g., as shown in FIGs. 5 and 6). Also, if the first embodiment does not allow for a desired combination of phase shift and transmittance, then the second embodiment may be better suited to do so for a given wavelength (λ_t) and mask blank combination (and vice versa).

Please amend paragraph [0032] as follows:

It will be appreciated by those skilled in the art having the benefit of this disclosure that embodiments of the present invention provide methods of forming an attenuated phase-shifting mask for use with one wavelength of light from a mask blank designed for use with another wavelength of light. It should be understood that the drawings and detailed description herein are to be regarded in an illustrative rather than a restrictive manner, and are not intended to limit the invention to the particular forms and examples disclosed. On the contrary, the invention includes any further modifications, changes, rearrangements, substitutions, alternatives, design choices, and embodiments apparent to those of ordinary skill in the art, without departing from the spirit and scope of this invention, as defined by the following claims. Thus, it is intended that the following claims be interpreted to embrace all such further modifications, changes, rearrangements, substitutions, alternatives, design choices, and embodiments.